AD NUMBER
AD917371
LIMITATION CHANGES
TO: **Approved for public release; distribution is unlimited.**
FROM: **Distribution authorized to U.S. Gov't. agencies only; Test and Evaluation; 04 FEB 1974. Other requests shall be referred to Deputy Chief of Staff for Military Operations, (Army), Attn: DAMO-ODU, Washington, DC 20310.**
AUTHORITY
AGO D/A ltr, 29 Apr 1980

DEPARTMENT OF THE ARMY
OFFICE OF THE ADJUTANT GENERAL
WASHINGTON, D.C. 20310

REPLY TO ATTENTION OF:

DAAG-PAP-A (M) (4 Feb 74) DAMO-ODU

26 February 1974

Expires 26 February 1975

SUBJECT: Operational Report - Lessons Learned, Hqs, 9th Medical Laboratory, Period Ending 31 October 1971

SEE DISTRIBUTION

1. The attached report is forwarded for review and evaluation in accordance with para 4b, AR 525-15.

2. The information contained in this report is provided to insure that lessons learned during current operations are used to the benefit of future operations and may be adapted for use in developing training material, as appropriate. This report should not be interpreted as the official view of the Department of the Army, or of any agency of the Department of the Army.

3. Information of actions initiated as a result of your evaluation should be forwarded to the HQ DA (DAMO-ODU) Washington, D.C. 20310, within 90 days of receipt of this letter.

BY ORDER OF THE SECRETARY OF THE ARMY:

VERNE L. BOWERS
Major General, USA
The Adjutant General

1 Incl
as

DISTRIBUTION:
Commander
US Army Training and Doctrine Command
US Army Materiel Command
Commandant
US Army War College
US Army Medical Field Service School

UNCLASSIFIED REPORT
DISTRIBUTION LIMITED TO U.S. GOV'T AGENCIES ONLY; TEST AND EVALUATION; 4 Feb 74. OTHER REQUEST FOR THIS DOCUMENT MUST BE REFERRED TO THE DEPUTY CHIEF OF STAFF FOR MILITARY OPERATIONS (ARMY), ATTN: DAMO-ODU, WASHINGTON, D.C. 20310

Copies furnished:
Deputy Chief of Staff for Military Operations
Assistant Chief of Staff for Force Development
Chief of Research and Development
Chief of Engineers
(Continued on page 2)

DISTRIBUTION (Continued)
The Surgeon General
Commander in Chief, US Army, Europe
Commander, US Army Forces Southern Command
Commandant of the Marine Corps
Defense Documentation Center
Commander
  US Army Land Warfare Laboratory
  US Army Logistics Evaluation Agency
  US Army Mobility Equipment Research & Development Center

DEPARTMENT OF THE ARMY
HEADQUARTERS, 9TH MEDICAL LABORATORY
APO SF 96384

AVBJ ML 23 November 1971

SUBJECT: Operational Report - Lessons Learned, Headquarters, 9th Medical Laboratory, period ending 31 October 1971, RCS CSFOR - 65 (R3)

THRU: Commanding Officer
USAMEDCOMV
APO SF 96384

TO: Assistant Chief of Staff for Force Development
Department of the Army
Washington, D.C. 20310

2. LESSONS LEARNED: Commanders's Observations, Evaluations and Recommendations

a. Personnel

(1) Medical Staffing

(a) OBSERVATION: Due to an acute shortage of laboratory specialists, the four urine testing laboratories were not fully staffed with the authorized number of 92B personnel (medical laboratory specialists). Personnel with an MOS of 91A (medical corpsman) and others with a non-medical MOS were utilized to fill the vacancies ereated in the laboratories and urine collection centers respectively.

(b) EVALUATION: The placement of the 91A's in the laboratories reduced the total number of 92B's needed and allowed for fuller utilization of the highly trained 92B personnel.

The 91A's required a brief OJT period in the simple laboratory procedures.

The non-medical personnel functioned well on the urine collection teams.

(c) RECOMMENDATION: That 91A or non-medical personnel be utilized on the urine collection teams.

That 91A personnel be utilized within the urine testing laboratories to perform simple repetitive laboratory procedures.

Inclosure
DAMO-ODU
712096

b. INTELLIGENCE: None

c. OPERATIONS

(1) Free Radical Assay Technique

(a) OBSERVATION: Problems in the operational reliability of FRAT instruments have been experienced.

(b) EVALUATION: Problems have been traced to high temperature and high humidity conditions caused by inadequate enviromental control of FRAT area.

(c) RECOMMENDATION: That FRAT instruments be installed in an isolated, controlled environment, the temperature of which will not exceed 71° F.

(2) Analytical Grade Reagents (ACS)

(a) OBSERVATION: For extracting morphine from urine, analytical grade (ACS) solvents can be substituted for the spectro-grade solvents supplied as part of the basic load.

(b) EVALUATION: ACS solvents have proved to be as interference free as spectro-grade solvents for use in urine extraction.

(c) RECOMMENDATION: That ACS solvents be substituted for spectro-grade solbents by attrition. This will result in substantial monetary savings.

(3) Morphine confirmation

(a) OBSERVATION: In mid July, due to exhaustion of supplies necessary to perform Gas Liquid Chromatograph (GLC), Thin-Layer Chromatography after urine hydrolysis (H-TLC) was instituted as a field expedient for morphine confirmation.

(b) EVALUATION: H-TLC has proved to be as reliable as GLC for confirming morphine in urine. It is simple, rapid and less prone to problems in interpretation.

(c) RECOMMENDATION: That H-TLC be retained as an independent confirmatory procedure and that consideration be given to its use as the primary confirmation method, retaining GLC for final confirmation of specimens for which H-TLC gave a negative or equivocal result.

(4) Initiation of Hepatitis Associated Antigen (HAA) Screening in Blood Donors.

(a) OBSERVATION: Most locally drawn blood in RVN is for emergency and/or MasCal situations. The blood would be drawn and used, before a test result for hepatitis (HAA) would be available.

(b) EVALUATION: Most whole blood used by US Forces, Vietnam is procured and screened for hepatitis in the United States. Hepatitis (HAA) screening in US Forces hospitals, Vietnam would not be a worthwhile operation in the hospitals.

(c) RECOMMENDATION: Hepatitis (HAA) screening of donor units in the war zone be accomplished at a central laboratory with trained technicians and equipment.

(5) Ova and Parasite Detection

(a) OBSERVATION: The Formalin-Ether concentration technique for ova and parasites in stools is not effective for detecting protozoan trophozoites, yet these stages are preserved by MIF (Methiolate-Iodine-Formalin).

(b) EVALUATION: The MIF method for preservation and concentration of ova and parasites is a more efficient method for diagnoses on stools. However, many stocks of the standard item Mothiol[illegible] Thimerosal Tincture, N.F., 1:1000, FSN 6505-128-5701, are not equivalent to the required ingredient of the fixative. This laboratory determined that such stocks would be suitable with the addition of Eosin Y, thus effectively producing the Lilly No. 99 product that is required. Concentration of the specimen can then be accomplished in exactly the same manner as that of the Formalin-Ether concerntration with the following results; (a) detection of trophozoites in addition to heldinth ova and protozoan cysts; (b) higher recovery rate of intestinal parasite stages; (c) greater efficiency in technician performance; and (d) staining of the parasites prior to concentration.

(c) RECOMMENDATION: That medical laboratories at all levels adopt the MIF concentration as a routine steel concentration technique for ova and parasites.

(6) Malaria Diagnosis

(a) OBSERVATION: The Parasitology Division, as the Malaria Repository for RVN, is required to confirm all positive diagnoses of malaria made at US Forces treatment facilities. Many diagnoses are changed or invalidated by this laboratory with r egard to the species cited by the submitting facility.

(b) EVALUATION: Investigation into the abnormally high incidence of changes in diagnoses revealed that: (a) the Parasitology Division was not receiving blood smears made at the same time as that from which the primary diagnoses was made; (b) the Parasitology Division often received only one slide which might or might not have been representative of the parasitemia in the particular case; (c) many slides were submitted that were so poorly prepared that no confirmation could be made, in which case the lab slip was returned reading "specimen unsuitable for diagnosis"; (d) many hospital diagnoses of P. falciparun infection were unfounded (based upon the slide submitted to the Parasitology Division)

and the diagnosis had to be changed to "Plasmodium species undetermined"; (c) most laboratories were having no problems in recognizing P vivax infectings, but were often being hasty in diagnosing a mixed infection of P vivax and P. falciparun, and (f) mechnicians in the respective laboratories were often untrained in malaria diagnosis. On one occasion a technician expressed concern over the fact that he did not feel completely competent in the area, but that the laboratory was so short of personnel that he could not be spared for a few days of intensive training.

(c) RECOMMENDATIONS: (a) That all submitting facilities be required to forward, as a minimum, 2 slides prepared at the same time as that of the primary diagnosis of malaria. It is preferrable that one of the slides be unstained slides made at later dates from the same patient may also be submitted, but not as a substitution for the primary diagnostic slides; (b) that submitting laboratories be forcefully reminded of the need for producing properly prepared specimens; (c) that hospital laboratory supervisors insure that technicians performing procedures in malaria diagnosis are properly trained.

d. ORGANIZATION: None

e. TRAINING: None

f. LOGISTICS

(a) OBSERVATION: The laboratory has experienced considerable difficulties in receiving non-standard medical equipment, supplies and repair parts.

(b) EVALUATION: The medical supply system can not supply non-standard medical supplies as rapidly as standard supply items because of the process necessary to obtain and retain these supplies. Some requisitions for non-standard items have been on order for over a year. On the same hand, some non-standard supplies have been ordered through the MSI Drug Counter-Offensive Project and have been received within on month.

(c) RECOMMENDATION: Recommand the use of telephonic communications between USAMNA-CONUS, D.P.S.C. and the 32nd Medical Depot, Vietnam to accelerate the processing of requisitions as has been done with the MSI Project.

g. COMMUNICATIONS: None

h. MATERIEL: None

i. OTHER: None

LEROY R. HIEGER, MD
LTC, MO
Commanding

UNCLASSIFIED

Security Classification

DOCUMENT CONTROL DATA - R & D

(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)

1 ORIGINATING ACTIVITY (Corporate author) HQDA DAMO-ODU **Washington, D.C. 20310**	2a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED 2b. GROUP

3 REPORT TITLE

Operational Report - Lessons Learned, Headquarters, 9th Medical Laboratory, period ending 31 October 1971.

4 DESCRIPTIVE NOTES (Type of report and inclusive dates)

Operational Report - Lessons Learned 31 October 1971

5 AUTHOR(S) (First name, middle initial, last name)

9th Medical Laboratory
Leroy R. Hieger, MD, LTC

6 REPORT DATE 1 Feb 1974	7a. TOTAL NO. OF PAGES 8	7b. NO. OF REFS
8a. CONTRACT OR GRANT NO b. PROJECT NO N/A c. d.	9a. ORIGINATOR'S REPORT NUMBER(S) 712096 9b OTHER REPORT NO(S) (Any other numbers that may be assigned this report)	

10 DISTRIBUTION STATEMENT

11 SUPPLEMENTARY NOTES N/A	12. SPONSORING MILITARY ACTIVITY HQDA DAMO-ODU, **Washington, D.C. 20310**

13. ABSTRACT

DD FORM 1 NOV 68 1473

UNCLASSIFIED

Security Classification